an area of relatively compressible substrate formed in the surface of the relatively incompressible substrate adjacent the piezoelectric film forming a discrete area of increased sensitivity in the stretch direction and thickness dimension in the piezoelectric film adjacent the relatively compressible substrate to impinging acoustic pressure waves.

2. [Amended] The piezoelectric sensor of claim 1 further comprising:
a plurality of areas of relatively compressible substrate formed in the surface of the relatively incompressible substrate forming a continuous line array of discrete areas of increased sensitivity in the piezoelectric film to impinging acoustic pressure waves.

3. [Amended] The piezoelectric sensor of claim 2, further comprising:
a two-dimensional array of areas of relatively compressible substrate formed in the surface of the relatively incompressible substrate forming a two-dimensional array of areas of increased sensitivity in the piezoelectric film to impinging acoustic pressure waves.

4. [Amended] The piezoelectric sensor of claim 3, further comprising:
the two-dimensional array of areas of increased sensitivity are formed into a three-dimensional shape to form a three-dimensional array of areas of increased sensitivity to impinging acoustic pressure waves in the piezoelectric film.

5. [Amended] The piezoelectric sensor of claim 2 further comprising:

variation in at least one of a size and location of the areas of increased sensitivity to shape the beam pattern of the piezoelectric continuous line array.

6. [Amended] The piezoelectric sensor of claim 2 further comprising:
variation in at least one of a size and location of the areas of increased sensitivity to shape the spectral response of the piezoelectric continuous line array.

7. [Amended] The piezoelectric sensor of claim 2 further comprising:
variation in a ratio of the total surface area of the areas of increased sensitivity to the total surface area of the relatively incompressible substrate to shape the beam pattern of the piezoelectric continuous line array.

8. [Amended] The piezoelectric sensor of claim 2 further comprising:
variation in a ratio of the total surface area of the areas of increased sensitivity to the total surface area of the relatively incompressible substrate are varied to determine the spectral response of the piezoelectric continuous line array.

9. [Amended] The piezoelectric sensor of claim 3 further comprising:
a shape of the array formed to determine a beam pattern of the array.

10. [Amended] The piezoelectric sensor of claim 3 further comprising:
a shape of the array formed to determine the spectral response of the line array.

11. [Amended] The piezoelectric sensor of claim 2 further comprising:

a single set of leads, for monitoring the response of the piezoelectric element.

12. [Amended] The piezoelectric sensor of claim 3 further comprising:

variation in at least one of a size and location of the areas of increased sensitivity to shape the beam pattern of the piezoelectric array.

13. [Amended] The piezoelectric sensor of claim 3 further comprising:

variation in at least one of a size and location of the areas of increased sensitivity are varied to shape the spectral response of the piezoelectric array.

14. [Amended] The piezoelectric sensor of claim 3 further comprising:

variation in a ratio of the total surface area of the areas of increased sensitivity to the total surface area of the relatively incompressible substrate to shape the beam pattern of the piezoelectric array.

15. [Amended] The piezoelectric sensor of claim 3 further comprising:

variation in a ratio of the total surface area of the areas of increased sensitivity to the total surface area of the relatively incompressible substrate to determine the spectral response of the piezoelectric array.

16. [Amended] The piezoelectric sensor of claim 4 further comprising:

a shape of the spatial array formed to determine the beam pattern of the array.

17. [Amended] The piezoelectric sensor of claim 4 further comprising:

variation in a shape of the array to determine the spectral response of the array.

18. [Amended] The piezoelectric sensor of claim 4 further comprising:

a single set of leads, for monitoring the piezoelectric sensor response.

19. [Amended] The piezoelectric sensor of claim 4 further comprising:

a variation in at least one of a size and location of the areas of increased sensitivity varied to shape the beam pattern of the piezoelectric array.

20. [Amended] The piezoelectric sensor of claim 4 further comprising:

a variation in at least one of a size and a location of the areas of increased sensitivity are varied to shape the spectral response of the piezoelectric array.

21. [Amended] The piezoelectric sensor of claim 4 further comprising:

a variation in a ratio of a total surface area of the areas of increased sensitivity to a total surface area of the relatively incompressible substrate to shape a beam pattern of the piezoelectric array.

22. [Amended] The piezoelectric sensor of claim 4 further comprising:

a variation in a ratio of a total surface area of the areas of increased sensitivity to a total surface area of the relatively incompressible substrate to determine a spectral response of the piezoelectric array.

23. [Amended] The piezoelectric sensor of claim 4 further comprising a single set of leads, for monitoring the response of the piezoelectric sensor.

REMARKS

Claims 1-23 are remaining in this application.

The Examiner rejected claims 1-3 and 5-15 under 35 USC 012(a) as being clearly anticipated by Carson, Fromont or Bernstein. The Examiner stated,

> Each reference teaches an array of piezoelectric acoustic sensors located on an increased sensitive area of a rigid substrate. Note especially Carson, figs. 2,3,4 and 5F; Fromont, figs. 1, 2A, 3,4, and 6; and Bernstein figs. 2-5 and 12.

The Examiner rejected claims 4 and 16-23 under 35 USC 102(a) as being clearly anticipated by Yamamuro aor Bernstein, stating,

> Note especially Yamamuro fig. 18, 21, 25 and 26. Since Bernstein is conformed to the shape of a ships hull, it would be three-dimensional.

The applicant respectfully traverses the Examiner's rejection as follows:

The patents referenced by the Examiner (Carson, Fromont, Bernstein and Yamamuro) do not anticipate the present invention. Each of these cited patents describes an acoustic transducer that use piezoelectric film in combination with a fluid (or elastomer) filled void on one or more sides of the sensor element. In some of the referenced patents, the fluid filled void enhances sensor sensitivity, however, the voids provide enhanced sensitivity for the entirety of the sensor surface area rather than improving sensitivity at selective locations within the surface area of the element.

In each of the referenced patents, sensor arrays are formed by multiple discrete